Energy Efficiency in Massachusetts: Our First Fuel

Massachusetts is leading the way in energy efficiency – pulling out all the stops to cut energy waste and save money in buildings across the Commonwealth. Costing a fraction of the price of power generation, energy efficiency is now our "first fuel," and we're gearing up customer-focused programs and services that will put it to work for consumers and businesses alike.

Beginning in 2010, Massachusetts will deliver energy savings to residential, business, and institutional energy users at an unprecedented scale. A cadre of energy specialists, HVAC contractors, weatherizing experts and other technicians will deliver dramatic improvements in building performance and comfort across the state. And, by making home-grown energy efficiency the first fuel to meet our energy needs, we will create local jobs, cut this state's dependence on imported fossil fuels, and reduce pollution that causes global warming.

Massachusetts Energy Efficiency Program Benefits at a Glance

Total customer savings: ..... $6 billion

Total lifetime energy savings, GWh: .....30,000 gigawatt hours (GWh)

Total lifetime energy savings, therms: ..... 897 million therms

Total lifetime GHG reductions, tons: ..... 15 million tons

Total local green jobs: 4,000

Total residential participants*: ..... 1.9 million

Total commercial and industrial participants: ..... 45,000 (electric & gas combined)

*A participant is someone who has taken advantage of a single program offering. An individual could be counted as a participant more than once if s/he participates in more than one offering. (e.g., lighting, heating, & weatherization)

Building on a Tried and True Approach

For 20 years, Massachusetts has been delivering results through well established, highly regarded energy efficiency programs. These public-private partnerships have:

- Invested approximately $3 billion in buildings
- Delivered 90,000 gigawatt hours (GWh) of energy savings

As a result, we now meet about 10% of our electricity needs through energy efficiency.

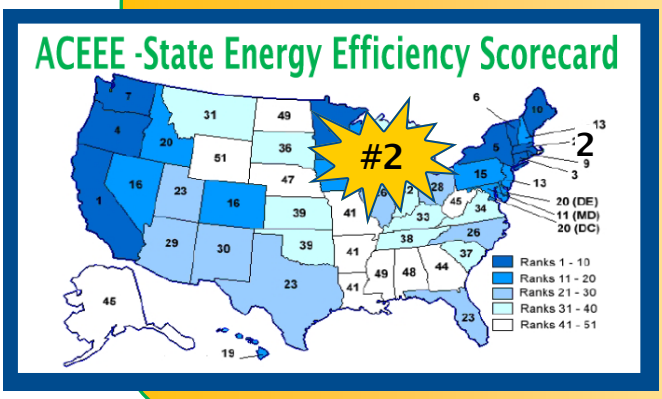
Over the years, the track record of these programs demonstrated that energy efficiency – the electricity and heat we don't use – is

"Energy efficiency is a critical component of Genzyme's greenhouse gas emissions reduction efforts. We have worked with the Massachusetts utilities over many years and have had great success with our efficiency retrofit projects."

Rick Mattila, *Director of Environmental Affairs*, Genzyme Corporation

not just better for the environment than the other options; it's also cheaper.

Success Applauded in 2009

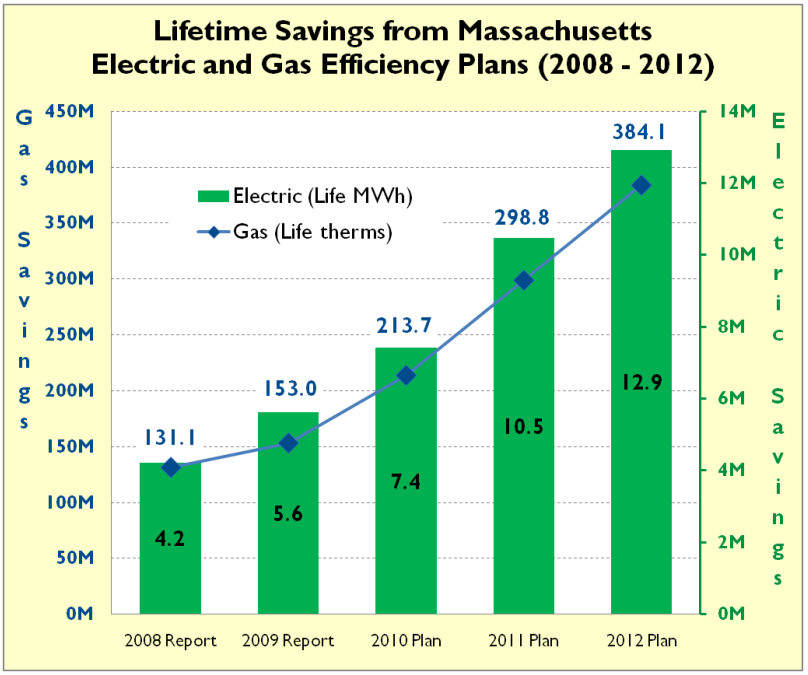


Governor Deval Patrick received the prestigious 2009 *Charles H. Percy Award for Public Service* from the Alliance to Save Energy.

Massachusetts' **energy efficiency programs** were ranked **second** nationally by the American Council for an Energy Efficient Economy (ACEEE).

Using Efficiency First

The Massachusetts legislature and Gov. Patrick created a powerful alliance in 2008 and adopted the Green Communities Act, a groundbreaking piece of legislation that requires investor-owned utilities to tap into *all* the energy efficiency opportunities that cost less than buying electricity from power plants. In other words, before turning to power plants around New England for the additional power needed to keep our lights on and use our TVs and computers, utility companies have to first make sure our lights, electronics, and appliances are not wasting energy.

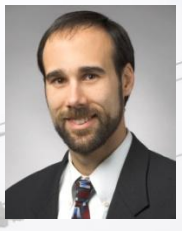


This pivot in energy policy will have rippling effects here and around the nation. Making efficiency our first fuel puts the least cost, lowest impact option front and center to meet our energy needs. Moreover, it means that we will invest in green jobs today - improving the quality and comfort of our buildings tomorrow.

Broad Stakeholder Support

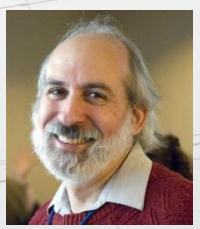
The new, unprecedented, and aggressive statewide three-year Energy Efficiency Investment Plans have broad stakeholder support – because Gov. Patrick's administration established a robust public review process involving stakeholders from day one. Over nearly 12 months, the Energy Efficiency Advisory Council (EEAC) met more than 25 times in public session to review the plans. Chaired by DOER Commissioner Phil Giudice, the EEAC is a board comprising 11 voting members, including representatives from business, industry and environmental groups, residential energy users, state environmental and economic development officials, and

the state's ratepayer advocate, Attorney General Martha Coakley, as well as the Program Administrators for the utility-run efficiency programs.



"We now have the most cutting edge efficiency programs in the nation. They will produce unparalleled savings to fuel business competitiveness and put billions back in consumers' pockets to re-invest in other parts of our economy."
Sam Krasnow, *Policy Advocate & Attorney*, Environment Northeast

"Energy efficiency is the cheapest and most effective tool we have to combat climate change. The newly approved utility energy efficiency plans now can deliver on their promise to drastically reduce greenhouse gas emissions while also delivering major economic dividends to the Commonwealth. Being green and saving money is a great combination."
John Kassel, *President*, Conservation Law Foundation



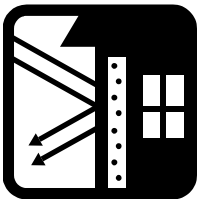
"With approval of this plan, Massachusetts moves ahead of the pack relative to most other states. By 2012, it is likely that Massachusetts will be number 1 in terms of per capita commitment to energy efficiency programs. Massachusetts' efforts on energy efficiency will help the state's economy and environment, and will show other states a path they too should follow." **Steve Nadel**
Executive Director, American Council for an Energy-Efficient Economy (ACEEE)

Collaboration. Aggressive Goals. New Resources.

These efficiency plans went through a brand new, comprehensive review process without missing a single legislative or regulatory deadline. Program Administrators were asked to significantly rework their traditional program designs, undertake unprecedented program integration across company lines, and meet a more condensed timeline than ever before.

On October 27, 2009 the EEAC *unanimously* approved the plans. The DPU approved the plans on January 28, 2010 after formal regulatory hearings and public comment.

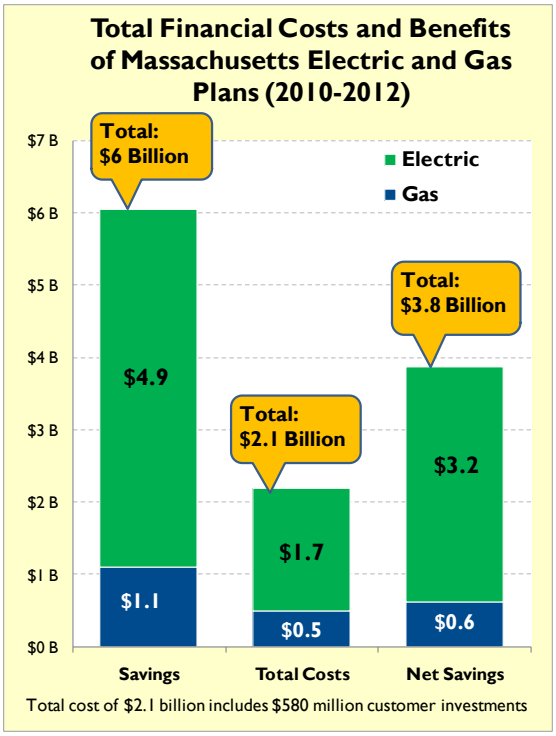
The result: a statewide blueprint for energy efficiency that is designed to yield unparalleled savings for consumers. The energy savings projected for 2010–2012 will put us on track to meet around 30% of our anticipated energy needs through energy efficiency by 2020 – "negawatts" not megawatts.



The electric savings alone are enough to power more than 350,000 households, or 15% of the utilities' residential electricity customers, for a year. The natural gas savings are enough to heat 57,000 homes, or approximately 4% of gas-heated homes, for a year.

These programs are expected to deliver nearly $6 billion in savings for electric and natural gas consumers over the next three years, through reduced energy bills. They are also expected to deliver even greater benefits to the statewide economy because of the ripple and multiplier effects of these inherently local investments. An Environment Northeast study (2009) projected an $89 billion boost to Massachusetts' gross state product (GSP) over 15 years if all cost-effective efficiency is captured, as in the three-year plans.

Funding for the programs will include existing charges on ratepayer bills, carbon allowance auction proceeds from the Regional Greenhouse Gas Initiative (RGGI) - the nation's first functioning carbon market, and regional energy market revenues.



Smart Choices Create Value, Comfort, and Savings

What this means for residents and companies across Massachusetts is local jobs, lower bills, more comfortable homes, and more efficient businesses. Energy specialists will be available to come to your home or office and tell you how to save energy. They will look for air leaks that cause drafts, and waste energy. They will tell you where you can add insulation to make your home more comfortable on cold winter evenings – and hot summer days – while lowering your monthly energy bills. They will help you find a local technician who can upgrade your outdated, inefficient heating system. And they can help you develop a long-term plan to dramatically improve the energy performance of your home as you perform routine maintenance and home improvement projects, enabling you to achieve 40, 50, even 80% reductions in your annual energy bills and your fossil fuel consumption over time.

New, Exciting Directions

To achieve these aggressive goals, the programs will reach out in new and exciting directions. Just a few examples:

- A new consumer-friendly website will provide a single point of entry to energy efficiency programs serving all utility customers: www.masssave.com, to be launched February 2010
- Financing options and incentives will expand to involve more customers and promote deeper savings
- Programs will be integrated across utility service territories so that customers who have operations in multiple areas – such as grocery stores and restaurant chains – will

Fresh food is a priority for brothers Chris and Matt Masiero, the co-owners of **Guido's Fresh Marketplace** in Great Barrington, Massachusetts. As purveyors of fresh produce, meats, and seafood, they depend on their coolers to work at optimal levels.

The Masiero brothers partnered with National Grid to install new controls on their cooler fans and cooler door heaters. This upgrade improved their coolers' efficiency and reduced their energy use.

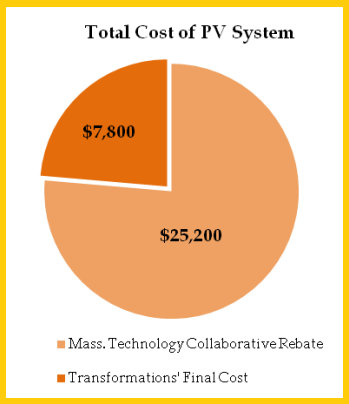
Total Project Costs	$14,000
National Grid Incentive	$11,600
Cost to Guido' Marketplace	$2,400
Estimated Annual Energy Cost Savings	$4,500

"The cost savings of this project made it a no brainer. Energy costs are always rising, so being able to reduce consumption was great. We're excited to continue with more upgrades. We plan to install new lighting in our building and add LED lighting to our produce cases too."
Matt Masiero, *Co-owner*

In 2008, **Transformations, Inc.,** a residential development and building company, was selected to construct a three-bedroom house for the **Zero Energy Challenge**. Carter Scott, a specialist in sustainable design and green building, took this challenge further. Not only did his team develop a super-efficient home that produces more energy than it uses, but also its cost-effective design made it affordable for prospective buyers. Transformations has continued to build homes that create a new way of living for families – zero-net-energy style.

"It has been incredibly satisfying to design and build a home that will essentially emit no greenhouse gases and cost the homeowner next to nothing for their heating, air conditioning, and electrical usage."

Carter Scott, *President*, Transformations



ENERGY-EFFICIENCY HIGHLIGHTS	
Insulation	Roof, R-75; Walls, R-49; Attic, R-50; Basement Ceiling, R-30
Windows	Triple-pane with Low-E and krypton gas
Heating & Cooling	Air-source heat pump mini-split system; Heat-recovery ventilator
On-site Renewable Energy	Solar PV system; Solar water-heating system
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be able to use a single form and access consistent support and incentives

- Pilot programs will test a variety of methods to motivate customers to participate and take more comprehensive actions than they would normally take, including comparing their energy use to neighbors or similar businesses, competing for energy savings, setting individual goals, and creating community campaigns
- Proactive outreach will use sophisticated social media techniques, as well as traditional campaigns, to reach customers and drive up participation

Homeowners and Renters

- Comprehensive energy assessments will be available to more homeowners and renters and will provide improved information, careful screening, more financial incentives and financing options, and free air and duct sealing
- Customized road maps for homes and businesses will provide customers with affordable, achievable energy efficiency investment plans for pursuing expanded savings
- Multi-lingual and multi-cultural outreach materials will broaden access in unprecedented ways
- Community-based partnerships will be developed to reach wider markets
- Deep energy retrofit pilots will test methods for reducing total energy by 50% or more in existing homes

Smith's Country Cheese, Inc. of Winchendon, Massachusetts, creates award-winning, hand-crafted farmstead cheeses based on family traditions.

A free, on-site energy assessment through **National Grid**'s Small Business Services Program led to the installment of high efficiency lighting, and many savings.

"We depend on natural resources for our livelihood, so we were excited to reduce our carbon footprint. And the new brighter lighting in our cold storage room – where we brine and age the cheese – makes our work easier."

Total Project Costs	$5,033
National Grid Incentive	$3,775
Cost to Smith's Country Cheese	$1,258
Estimated Annual Energy Cost Savings	$1,218
CO2 Lifetime Reductions	6 Tons

Dave Smith, *Owner*

Courtesy of National Grid

Businesses and Institutions

- Energy data will power change for business and institutional energy users, such as those participating in the Governor's Clean Energy Challenge
- Upgrades to larger multi-family housing units will capture energy savings for customers too long neglected because of the difficulty of determining who is responsible for energy efficiency in these buildings
- Business programs will now include additional proven energy-saving technologies, like Combined Heat and Power (CHP)

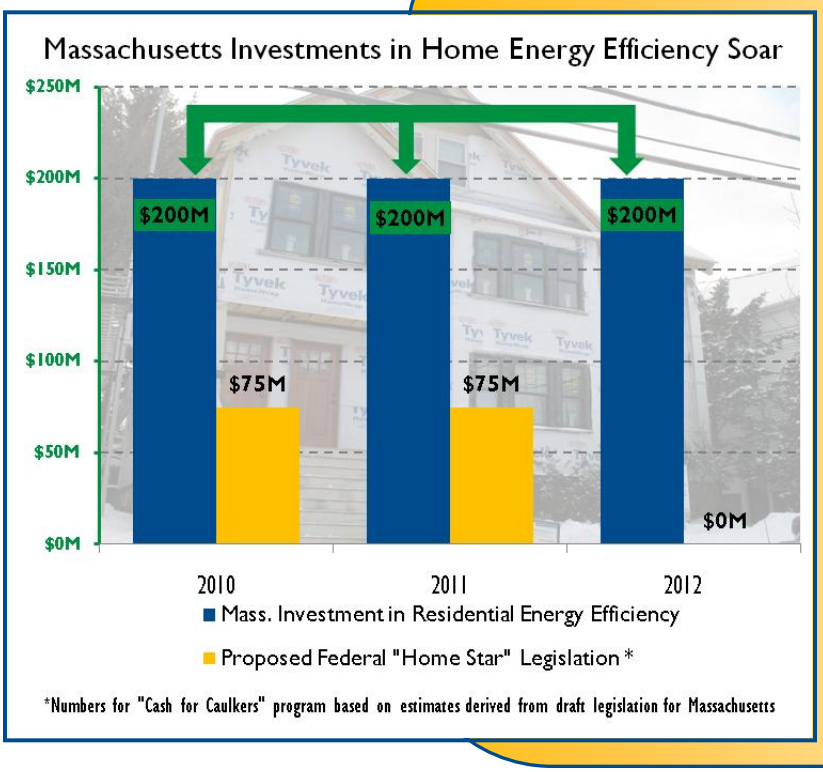
"One of the things that excites me the most is combined heat and power. It's very, very efficient, and it's untapped potential. We have companies that could definitely take advantage of that, and it's an area that hasn't been funded before."

Bob Rio, *Senior Vice President*, Government Affairs, Associated Industries of Massachusetts

Lasting Impacts: Energy, Economy, Environment, Health

In addition to delivering unprecedented levels of energy savings, these three-year programs:

- Create more than 4,000 jobs across the Commonwealth
- Reduce peak electricity demand by more than 400 MW – roughly the size of a conventional power plant
- Deliver nearly 15 million tons of greenhouse gas (GHG) emissions reductions towards the Global Warming Solutions Act goal of reducing GHG emissions by 80% by 2050



By The Numbers

Massachusetts' **$2 billion, three-year energy efficiency investment** is **3X** California's three-year energy efficiency investment, **per capita.**

ARRA Appliance Incentive
$6 million to Massachusetts
(one opportunity in 2010)

Mass. Energy Star Appliance Budget
$18 million
($6 million available each year, 2010 – 2012)